

**REMARKS**

Applicant has used the status identifier “Withdrawn-currently amended” to reflect amendments to withdrawn claim 21. Applicant notes that 37 C.F.R. 1.121 and M.P.E.P. § 714 list “Original,” “Currently amended,” “Canceled,” “Withdrawn,” “Previously presented,” “New,” and “Not entered” as the status identifiers to be used to indicate the status of the claims and that subsection C(E) of M.P.E.P. § 714 lists “Withdrawn-currently amended” as an acceptable alternative for “Withdrawn.”

The Final Office Action mailed August 28, 2007, has been received and reviewed. Claims 7, 14, and 20 through 24 are currently pending in the application. Claims 7, 14, 20, 23, and 24 stand rejected.

Applicant has amended each of claims 7, 14, and 21 to recite the transitional phrase “comprising.” Support for the amendments is found in at least as-filed claims 1, 7, and 14. Applicant has amended each of claims 23 and 24 to recite 1.0 parts by weight of carbon black. Support for the amendments is found in the as-filed specification at at least Tables 1 and 8. No new matter has been added.

Applicant respectfully requests reconsideration of the application as amended herein.

**35 U.S.C. § 112 Claim Rejections**

Claims 23 and 24 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. Applicant respectfully traverses this rejection, as hereinafter set forth.

In order to satisfy the written description requirement of 35 U.S.C. § 112, first paragraph, the disclosure of the application as originally filed must reasonably convey to those skilled in the relevant art that the applicants, as of the filing date of the original application, had possession of the claimed invention. *Alton*, 76 F.3d at 1172, 37 USPQ2d at 1581; *In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983).

The Examiner asserts that there is insufficient support for the term “carbon black”

because the as-filed specification discloses “N-330®.” See Office Action of August 28, 2007, page 3. Applicant respectfully disagrees and submits that the disclosure of “N-330® Carbon Black” in Tables 1 and 8 of the as-filed specification provides adequate support for recitation of the term “carbon black” in claims 23 and 24. As evidenced by the Supplemental Information Disclosure Statement filed on June 12, 2007, carbon black is the sole component of the compound classified under the ASTN number N-330. Moreover, as evidenced by the Supplemental Information Disclosure Statement filed herewith, the ASTN number N-330 is synonymous with the term “carbon black.” Thus, one of ordinary skill in the art would understand that a composition including “N-330® Carbon Black” contains carbon black.

Claims 23 and 24 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner has rejected claims 23 and 24 as being outside the scope of claims 7 and 14. Applicant has amended claims 7 and 14 to recite the transitional phrase “comprising” and, thus, the rejection of each of these claims is moot.

### **35 U.S.C. § 103(a) Obviousness Rejections**

Obviousness Rejection Based on U.S. Patent No. 4,501,841 to Herring *et al.* in View of U.S. Patent No. 4,726,987 to Trask *et al.* and WO 00/43445 to Guillot *et al.*

Claims 7, 14, and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,501,841 to Herring *et al.* (“Herring”) in view of U.S. Patent No. 4,726,987 to Trask *et al.* (“Trask”) and WO 00/43445 to Guillot *et al.* (“Guillot”). Applicant respectfully traverses this rejection, as hereinafter set forth.

To establish a *prima facie* case of obviousness the prior art reference (or references when combined) must teach or suggest all of the claim limitations. *In re Royka*, 490 F.2d 981, 985 (CCPA 1974); *see also* M.P.E.P. § 2143.03. Additionally, there must be “a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. *KSR Int'l Co.*

*v. Teleflex Inc.*, 127 S. Ct. 1727, 1742, 167 L.Ed.2d 705, 75 USLW 4289, 82 U.S.P.Q.2d 1385 (2007). Finally, to establish a *prima facie* case of obviousness there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). Furthermore, the reason that would have prompted the combination and the reasonable expectation of success must be found in the prior art, common knowledge, or the nature of the problem itself, and not based on the Applicant's disclosure. *DyStar Textilfarben GmbH & Co. Deutschland KG v. C. H. Patrick Co.*, 464 F.3d 1356, 1367 (Fed. Cir. 2006); MPEP § 2144. Underlying the obvious determination is the fact that statutorily prohibited hindsight cannot be used. *KSR*, 127 S.Ct. at 1742; *DyStar*, 464 F.3d at 1367.

Applicant notes that “[i]t is impermissible to use the claimed invention as an instruction manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered obvious.” *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992). Moreover, “[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.” *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988).

Applicant respectfully submits that claims 7, 14, and 20 are not obvious in light of the applied references because the Examiner has not provided a reason that would have prompted a person of ordinary skill in the art at the time the invention was made to combine the teachings of Herring, Trask, and Guillot in the manner asserted to produce the claimed invention.

Herring teaches an elastomeric lining material. Herring at column 1, lines 11-14. The elastomeric lining material includes an elastomeric polymer, such as polychloroprene, chlorosulfonated polyethylene, polyurethane, and ethylene propylene diene monomer (“EPDM”). *Id.* at column 3, lines 22-28. The elastomeric lining material also includes char-forming organic fibers and inorganic particulates. *Id.* at column 2, lines 38-41 and column 3, lines 62-68. The char-forming organic fibers are polyaramide pulp fibers. *Id.* The inorganic particulates include hydrated silica, mica, or quartz. *Id.* To improve flame retardance, the elastomeric lining material

also includes chlorinated organic compounds in combination with antimony oxide or hydrated alumina. *Id.* at column 4, lines 3-14.

Trask teaches a fire retardant textile panel. Trask at the Abstract. The textile panel has five layers and includes a core material having a mixture of two or more staple fibers, such as polyamide fibers, polyimide fibers, poly(imideamide) fibers, aramide fibers, polyolefin fibers, polyester fibers, cellulosic fibers, sulfurs, glass fibers, carbon fibers, or polyether-ether ketone fibers. *Id.* at column 4, lines 48-53 and column 7, lines 6-12. The core material is sandwiched by four other layers, each of which includes a mixture of two or more of the above-mentioned staple fibers. *Id.* at column 4, line 66 through column 5, line 37. A skin, such as a polyvinylchloride ("PVC") material, is attached to a top surface of the five layers. *Id.* at column 5, lines 38-39.

Guillot teaches an EPDM formulation for a solid propellant rocket motor. Guillot at the Abstract. Guillot teaches that curing systems such as sulfur based curing agents in combination with organic accelerators and peroxide curing agents. *Id.* at page 40, lines 10-12.

It is respectfully submitted that, without the benefit of hindsight, one of ordinary skill in the art would not be motivated to combine the teachings of Herring and Trask in the asserted manner. As acknowledged by the Examiner, Herring does not teach or suggest a composition that includes "an organic filler selected from the group consisting of polyvinyl chloride, melamine, and a homopolymer of vinylidene chloride," as recited in each of claims 7 and 14. Thus, the Examiner relies on Trask as teaching "that halogenated polymers like polyvinylchloride are advantageous in fire-retardant applications due to its two-stage degradative process." *See* Office Action of August 28, 2007, page 5. However, the Examiner has not provided any reason that would have prompted one of ordinary skill in the art to use polyvinylchloride in the composition of Herring.

The as-filed specification describes that, under combustion conditions, the decomposition of the claimed composition may be prevented or slowed by the inclusion of organic fillers, such as polyvinylchloride. *See* the as-filed specification, paragraph [0030]. Although Trask teaches that polyvinylchloride is fire resistant, the Examiner

does not provide a reason for using a fire retardant in a composition such as that of Herring. Accordingly, Applicant respectfully submits that one of ordinary skill in the art would have no reasonable expectation of success in combining polyvinylchloride with the composition of Herring to obtain the claimed invention.

It is further asserted in the Office Action that:

[g]iven that the polyphenylene sulfide and polyvinylchloride are advantageously used with or as substitutes for a char-former such as polyaramide fibers such as taught by Trask, it would have been obvious to one of ordinary skill in the art to utilize polyphenylene sulfide or polyvinylchloride as a char-former in the rocket motor insulation of Herring. *See* Final Office Action of August 28, 2007, page 5.

However, Trask does not teach using polyvinylchloride “with or as substitutes for a char-former,” as asserted by the Examiner. *Id.* Rather, Trask teaches an exterior skin formed from polyvinylchloride that may be laminated on the outside of a fibrous batt of fibers, some of which may be char-forming. Trask at col. 4, lines 40-41; col. 6, lines 20-21; and col. 8, lines 31-33. Although Trask teaches that fluoropolymers, such as PVC, are temperature resistant, Trask does not teach or suggest the incorporation of such materials into a composition such as that of Herring. Rather, the materials are used as an exterior skin. Thus, contrary to the Examiner’s assertion, Trask does not teach or suggest using polyvinylchloride as a substitute for or in a composition with a char-former.

As such, withdrawal of the 35 U.S.C. § 103(a) obviousness rejections of claims 7 and 14 is respectfully solicited, as is allowance of each of these claims.

Claim 20 is allowable, *inter alia*, as depending from an allowable base claim.

Obviousness Rejection Based on Herring in View of Trask, Guillot and U.S. Patent No. 5,821,284 to Graham *et al.*

Claims 23 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Herring in view of Trask, Guillot and U.S. Patent No. 5,821,284 to Graham *et al.* (“Graham”). Applicant respectfully traverses this rejection, as hereinafter set forth.

The nonobviousness of independent claims 7 and 14 preclude a rejection of claims 23 and 24, which depend, respectively, therefrom because a dependent claim is obvious only if the

independent claim from which it depends is obvious. *See In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03.

Therefore, the Applicant requests withdrawal of the 35 U.S.C. § 103(a) obviousness rejection of claims 23 and 24.

### ENTRY OF AMENDMENTS

The amendments to claims 7, 14, 21, 23, and 24 should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add new matter to the application.

It is respectfully submitted that independent claims 7 and 14 are generic to all of the species of invention that were identified in the Election of Species Requirement in the above-referenced application. In view of the allowability of these claims, claims 21 and 22 which have been withdrawn from consideration, should be considered and allowed.  
M.P.E.P. § 806.04(d).

### CONCLUSION

Claims 7, 14, and 20-24 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, she is respectfully invited to contact Applicant's undersigned attorney.

Respectfully submitted,



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